

ABSTRACT

A dioptric projection objective for forming an image of an object, includes a plurality of lenses arranged in an optical path between the object and the image. At least two lenses of the plurality of lenses have respective mutually adjacent lens surfaces which are aspheric to define a double asphere, and the plurality of lenses include positive lens groups, each having at least two lenses, and negative lens groups each having at least two lenses. In addition, a dioptric projection objective having an image side numerical aperture that is greater than or equal to 0.75 for forming an image of an object, includes a plurality of lenses arranged in an optical path between the object and the image, with at least two of the lenses of the plurality of lenses having respective mutually proximal lens surfaces which are aspheric to define a double asphere.